



SEQUENCE LISTING

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TECH CENTER 1600/2900

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<120> Prolactin Secretion Modulator

<130> 2472USOP

<140> US 09/446,543

<141> 1999-12-20

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<151> 1998-06-22

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<151> 1997-06-23

<160> 99

<170> PatentIn version 3.0

<210> 1

<211> 98

<212> PRT

<213> Bovine

<400> 1

Met Lys Ala Val Gly Ala Trp Leu Leu Cys Leu Leu Leu Leu Gly Leu
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Ala Leu Gln Gly Ala Ala Ser Arg Ala His Gln His Ser Met Glu Ile
20 25 30

Arg Thr Pro Asp Ile Asn Pro Ala Trp Tyr Ala Gly Arg Gly Ile Arg
35 40 45

Pro Val Gly Arg Phe Gly Arg Arg Arg Ala Ala Pro Gly Asp Gly Pro
50 55 60

Arg Pro Gly Pro Arg Arg Val Pro Ala Cys Phe Arg Leu Glu Gly Gly
65 70 75 80

Ala Glu Pro Ser Arg Ala Leu Pro Gly Arg Leu Thr Ala Gln Leu Val
 85 90 95

Gln Glu

<210> 2
 <211> 294
 <212> DNA
 <213> bovine

<400> 2
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gctgccagca gagccaccca gcactccatg gagatccgca cccccgacat caaccctgcc
 120

tggtacgcrg gccgtgggat ccggcccgtg ggccgcttcg gccggcgaag agctgcccyy
 180

ggggacggac ccaggcctgg cccccggcgt gtgccggcct gcttccgcct ggaaggcggy
 240

gctgagccct cccgagccct cccggggcgg ctgacggccc agctgggtcca ggaa
 294

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 <213> artificial

<220>
 <223> bovine fragment (23-51)

<400> 3

Ser Arg Ala His Gln His Ser Met Glu Ile Arg Thr Pro Asp Ile Asn
 1 5 10 15

Pro Ala Trp Tyr Ala Gly Arg Gly Ile Arg Pro Val Gly
 20 25

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<212> PRT
 <213> artificial

<220>
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<400> 4

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 1 5 10 15

Val Gly Arg

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 <212> PRT
 <213> artificial

<220>
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<400> 5

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 1 5 10 15

Pro Ala Trp Tyr Ala Gly Arg Gly Ile Arg Pro Val Gly Arg Phe
 20 25 30

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 <212> PRT
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<220>
 <223> bovine fragment (23-54)

<400> 6

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 1 5 10 15

Pro Ala Trp Tyr Ala Gly Arg Gly Ile Arg Pro Val Gly Arg Phe Gly
 20 25 30

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 <212> PRT
 <213> artificial

<220>
 <223> bovine fragment (23-55)

<400> 7

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 1 5 10 15

Pro Ala Trp Tyr Ala Gly Arg Gly Ile Arg Pro Val Gly Arg Phe Gly
 20 25 30

Arg

<210> 8
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 <212> PRT
 <213> artificial

<220>
 <223> bovine fragment (34-53)

<400> 8

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 1 5 10 15

Val Gly Arg Phe
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<210> 9
 <211> 21
 <212> PRT
 <213> artificial

<220>
 <223> bovine fragment (34-54)

<400> 9

Thr Pro Asp Ile Asn Pro Ala Trp Tyr Ala Gly Arg Gly Ile Arg Pro

1 5 10 15

Val Gly Arg Phe Gly
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<210> 10
<211> 22
<212> PRT
<213> artificial

<220>
<223> bovine fragment (34-55)

<400> 10

Thr Pro Asp Ile Asn Pro Ala Trp Tyr Ala Gly Arg Gly Ile Arg Pro
1 5 10 15

Val Gly Arg Phe Gly Arg
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<210> 11
<211> 87
<212> DNA
<213> bovine

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gcrggccgtg ggatccggcc cgtgggc
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<210> 12
<211> 57
<212> DNA
<213> bovine

<400> 12
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57

<210> 13
<211> 93

<212> DNA
<213> bovine

<400> 13
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60

gcrggccgtg ggatccggcc cgtgggcccgc ttc
93

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<211> 96
<212> DNA
<213> bovine

<400> 14
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<211> 99
<212> DNA
<213> bovine

B1
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60

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99

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<211> 60
<212> DNA
<213> bovine

<400> 16
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60

<210> 17
 <211> 63
 <212> DNA
 <213> bovine

<400> 17
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 60

ggc
 63

<210> 18
 <211> 66
 <212> DNA
 <213> bovine

<400> 18
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 60

ggccgg
 66

<210> 19
 <211> 91
 <212> PRT
 <213> Human

<400> 19

Leu Val Leu Val Ile Ala Arg Val Arg Arg Leu His Asn Val Thr Asn
 1 5 10 15

Phe Leu Ile Gly Asn Leu Ala Leu Ser Asp Val Leu Met Cys Thr Ala
 20 25 30

Cys Val Pro Leu Thr Leu Ala Tyr Ala Phe Glu Pro Arg Gly Trp Val
 35 40 45

Phe Gly Gly Gly Leu Cys His Leu Val Phe Phe Leu Gln Pro Val Thr
 50 55 60

Val Tyr Val Ser Val Phe Thr Leu Thr Thr Ile Ala Val Asp Arg Tyr
65 70 75 80

Val Val Leu Val His Pro Leu Arg Arg Arg Ile
85 90

<210> 20
<211> 59
<212> PRT
<213> human

<400> 20

Gly Leu Leu Leu Val Thr Tyr Leu Leu Pro Leu Leu Val Ile Leu Leu
1 5 10 15

Ser Tyr Val Arg Val Ser Val Lys Leu Arg Asn Arg Val Val Pro Gly
20 25 30

Cys Val Thr Gln Ser Gln Ala Asp Trp Asp Arg Ala Arg Arg Arg Arg
35 40 45

Thr Phe Cys Leu Leu Val Val Val Val Val Val
50 55

B1 cut
<210> 21
<211> 370
<212> PRT
<213> human

<400> 21

Met Ala Ser Ser Thr Thr Arg Gly Pro Arg Val Ser Asp Leu Phe Ser
1 5 10 15

Gly Leu Pro Pro Ala Val Thr Thr Pro Ala Asn Gln Ser Ala Glu Ala
20 25 30

Ser Ala Gly Asn Gly Ser Val Ala Gly Ala Asp Ala Pro Ala Val Thr
35 40 45

Pro Phe Gln Ser Leu Gln Leu Val His Gln Leu Lys Gly Leu Ile Val
50 55 60

Leu Leu Tyr Ser Val Val Val Val Val Gly Leu Val Gly Asn Cys Leu
65 70 75 80

Leu Val Leu Val Ile Ala Arg Val Arg Arg Leu His Asn Val Thr Asn
 85 90 95
 Phe Leu Ile Gly Asn Leu Ala Leu Ser Asp Val Leu Met Cys Thr Ala
 100 105 110
 Cys Val Pro Leu Thr Leu Ala Tyr Ala Phe Glu Pro Arg Gly Trp Val
 115 120 125
 Phe Gly Gly Gly Leu Cys His Leu Val Phe Phe Leu Gln Pro Val Thr
 130 135 140
 Val Tyr Val Ser Val Phe Thr Leu Thr Thr Ile Ala Val Asp Arg Tyr
 145 150 155 160
 Val Val Leu Val His Pro Leu Arg Arg Arg Ile Ser Leu Arg Leu Ser
 165 170 175
 Ala Tyr Ala Val Leu Ala Ile Trp Ala Leu Ser Ala Val Leu Ala Leu
 180 185 190
 Pro Ala Ala Val His Thr Tyr His Val Glu Leu Lys Pro His Asp Val
 195 200 205
 Arg Leu Cys Glu Glu Phe Trp Gly Ser Gln Glu Arg Gln Arg Gln Leu
 210 215 220
 Tyr Ala Trp Gly Leu Leu Leu Val Thr Tyr Leu Leu Pro Leu Leu Val
 225 230 235 240
 Ile Leu Leu Ser Tyr Val Arg Val Ser Val Lys Leu Arg Asn Arg Val
 245 250 255
 Val Pro Gly Cys Val Thr Gln Ser Gln Ala Asp Trp Asp Arg Ala Arg
 260 265 270
 Arg Arg Arg Thr Phe Cys Leu Leu Val Val Val Val Val Val Phe Ala
 275 280 285
 Val Cys Trp Leu Pro Leu His Val Phe Asn Leu Leu Arg Asp Leu Asp
 290 295 300
 Pro His Ala Ile Asp Pro Tyr Ala Phe Gly Leu Val Gln Leu Leu Cys
 305 310 315 320

His Trp Leu Ala Met Ser Ser Ala Cys Tyr Asn Pro Phe Ile Tyr Ala
 325 330 335

Trp Leu His Asp Ser Phe Arg Glu Glu Leu Arg Lys Leu Leu Val Ala
 340 345 350

Trp Pro Arg Lys Ile Ala Pro His Gly Gln Asn Met Thr Val Ser Val
 355 360 365

Val Ile
 370

<210> 22
 <211> 206
 <212> PRT
 <213> murine

<400> 22

Leu Val Leu Val Ile Ala Arg Val Arg Arg Leu Tyr Asn Val Thr Asn
 1 5 10 15

Phe Leu Ile Gly Asn Leu Ala Leu Ser Asp Val Leu Met Cys Thr Ala
 20 25 30

Cys Val Pro Leu Thr Leu Ala Tyr Ala Phe Glu Pro Arg Gly Trp Val
 35 40 45

Phe Gly Gly Gly Leu Cys His Leu Val Phe Phe Leu Gln Ala Val Thr
 50 55 60

Val Tyr Val Ser Val Phe Thr Leu Thr Thr Ile Ala Val Asp Arg Tyr
 65 70 75 80

Val Val Leu Val His Pro Leu Arg Arg Arg Ile Ser Leu Arg Leu Ser
 85 90 95

Ala Tyr Ala Val Leu Ala Ile Trp Val Leu Ser Ala Val Leu Ala Leu
 100 105 110

Pro Ala Ala Val His Thr Tyr His Val Glu Leu Lys Pro His Asp Val
 115 120 125

Arg Leu Cys Glu Glu Phe Trp Gly Ser Gln Glu Arg Gln Arg Gln Leu
 130 135 140

Tyr Ala Trp Gly Leu Leu Leu Val Thr Tyr Leu Leu Pro Leu Leu Val
145 150 155 160

Ile Leu Leu Ser Tyr Ala Arg Val Ser Val Lys Leu Arg Asn Arg Val
165 170 175

Val Pro Gly Arg Val Thr Gln Ser Gln Ala Asp Trp Asp Arg Ala Arg
180 185 190

Arg Arg Arg Thr Phe Cys Leu Leu Val Val Val Val Val Val
195 200 205

<210> 23

<211> 126

<212> PRT

<213> murine

<400> 23

Val Val Leu Val His Pro Leu Arg Arg Arg Ile Ser Leu Arg Leu Ser
1 5 10 15

Ala Tyr Ala Val Leu Gly Ile Trp Ala Leu Ser Ala Val Leu Ala Leu
20 25 30

Pro Ala Ala Val His Thr Tyr His Val Glu Leu Lys Pro His Asp Val
35 40 45

Ser Leu Cys Glu Glu Phe Trp Gly Ser Gln Glu Arg Gln Arg Gln Ile
50 55 60

Tyr Ala Trp Gly Leu Leu Leu Gly Thr Tyr Leu Leu Pro Leu Leu Ala
65 70 75 80

Ile Leu Leu Ser Tyr Val Arg Val Ser Val Lys Leu Arg Asn Arg Val
85 90 95

Val Pro Gly Ser Val Thr Gln Ser Gln Ala Asp Trp Asp Arg Ala Arg
100 105 110

Arg Arg Arg Thr Phe Cys Leu Leu Val Val Val Val Val Val
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<210> 24

<211> 273

<212> DNA

<213> human

<400> 24

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120

gccttcgagc cagcgggctg ggtgttcggc ggcggcctgt gccacctggg cttcttcctg
180

cagccgggtca ccgtctatgt gtcggtgttc acgctcacca ccacgcagc ggaccgggtac
240

gtcgtgctgg tgcacccgct gaggcggcgc atc
273

<210> 25

<211> 177

<212> DNA

<213> human

<400> 25

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gtgtcagtga agctccgcaa ccgcgtgggtg ccgggctgcg tgaccagag ccaggccgac
120

tgggaccgcg ctgggcgcgg gcgcaccttc tgcttgcctg tgggtggtcgt ggtgggtg
177

<210> 26

<211> 1110

<212> DNA

<213> human

<400> 26

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gcggtcacaa ctcccgcgaa ccagagcgca gaggcctcgg cgggcaacgg gtcgggtggct
120

ggcgcggaag ctccagccgt cagcccttc cagagcctgc agctggtgca tcagctgaag
180

gggctgatcg tgctgctcta cagcgctgtg gtggctgtgg ggctgggtgg caactgcctg
240

ctggtgctgg tgatcgcgcg ggtgcgcggg ctgcacaacg tgacgaactt cctcatcggc
300

aacctggcct tgtccgacgt gctcatgtgc accgcctgcg tgccgctcac gctggcctat
360

gccttcgagc cagcgggctg ggtgttcggc ggcggcctgt gccacctggg cttcttcctg
420

cagccgggtca ccgtctatgt gtcgggtgtc acgctacca ccatcgaggt ggaccgctac
480

gtcgtgctgg tgcacccgct gaggcggcgc atctcgctgc gcctcagcgc ctacgctgtg
540

ctggccatct gggcgctgtc cgcgggtgtg gcgctgcccg ccgccgtgca cacctatcac
600

gtggagctca agccgcacga cgtgcgcctc tgcgaggagt tctggggctc ccaggagcgc
660

cagcgccagc tctacgcctg ggggctgctg ctggtcacct acctgctccc tctgctggtc
720

atcctcctgt cttacgtccg ggtgtcagtg aagctccgca accgcgtggg gccgggctgc
780

gtgaccaga gccaggccga ctgggaccgc gctcggcgcc ggcgcacctt ctgcttgctg
840

gtggtggctg tgggtggtgt cgcggtctgc tggctgcgcg tgcacgtctt caacctgctg
900

cgggacctcg acccccacgc catcgacct tacgcctttg ggctggtgca gctgctctgc
960

cactggctcg ccatgagttc ggctgctac aacccttca tctacgcctg gctgcacgac
1020

agcttcgcgc aggagctgcg caaactgttg gtcgcttggc cccgcaagat agccccccat
1080

ggccagaata tgaccgtcag cgtgggtcatc
1110

<210> 27
<211> 618
<212> DNA
<213> murine

<400> 27
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60

aacctggcct tgtccgaagt gctcatgtgc accgcctgcg tgccgctcac gctggcctat
120

gccttcgagc cagcgggctg ggtgttcggc ggcggcctgt gccacctggc cttcttcctg
180

caggcgggtca ccgtctatgt gtcgggtgttc acgctcacca ccacgcagc ggaccgctac
240

gtcgtgctgg tgcacccgct gagggcgcgc atctcgtgc gccacagcgc ctacgctgtg
300

ctggccatct ggggtgctgtc cgcgggtgctg gcgctgccc cgcgcgtgca cacctatcac
360

gtggagctca agccgcacga cgtgcgcctc tgcgaggagt tctggggctc ccaggagcgc
420

cagcgcagc tctacgctg ggggctgctg ctggtcacct acctgctccc tctgctggtc
480

atcctcctgt cttacgcccg ggtgtcagtg aagctccgca accgcgtggc gccgggcgc
540

gtgaccaga gccaggccga ctgggaccgc gctcgggcgc ggcgcacctt ctgcttgctg
600

gtggtggctg tgggtggg
618

<210> 28
 <211> 378
 <212> DNA
 <213> murine

<400> 28
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 60

ctgggcatct gggctctatc tgcagtgtg gcgctgccgg ccgcggtgca cacctaccat
 120

gtggagctca agccccacga cgtgagcctc tgcgaggagt tctggggctc gcaggagcgc
 180

caacgccaga tctacgcctg ggggctgctt ctgggcacct atttgctccc cctgctggcc
 240

atcctcctgt cttacgtacg ggtgtcagtg aagctgagga accgcgtggt gcctggcagc
 300

gtgaccacga gtcaagctga ctgggaccga gcgcgtcgcc gccgcacttt ctgtctgctg
 360

gtgggtggtgg tggtagtg
 378

<210> 29
 <211> 25
 <212> DNA
 <213> artificial

<220>
 <223> primer

<220>
 <221> misc_feature
 <222> (20)..(20)
 <223> any base (A, G, C, T)

<400> 29
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 25

<210> 30
 <211> 27
 <212> DNA
 <213> artificial

<220>
 <223> primer

<220>
 <221> misc_feature
 <222> (3)..(3)
 <223> any base (A, C, G, T)

<220>
 <221> misc_feature
 <222> (12)..(12)
 <223> any base (A, C, G, T)

<400> 30
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Bf
 wf

<210> 31
 <211> 27
 <212> DNA
 <213> artificial

<220>
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<220>
 <221> misc
 <222> (15)..(15)
 <223> any base (A, C, G, T)

<220>
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 <222> (16)..(16)
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<210> 32
<211> 29
<212> DNA
<213> artificial

<220>
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<220>
<221> misc
<222> (23)..(23)
<223> any base (A, C, G, T)

<400> 32
akgwagwagg gcagccagca gansrygaa
29

<210> 33
<211> 24
<212> DNA
<213> artificial

<220>
<223> primer

<400> 33
ctgacttatt ttctgggctg ccgc
24

<210> 34
<211> 24
<212> DNA
<213> artificial

<220>
<223> primer

<400> 34
aacaccgaca catagacggt gacc
24

<210> 35
<211> 20
<212> DNA
<213> artificial

<220>
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<220>
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<223> i

<400> 35
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<210> 36
<211> 26
<212> DNA
<213> artificial

<220>
<223> primer

<220>
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<222> (3)..(3)
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<222> (18)..(18)
 <223> i

<220>
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 <222> (24)..(24)
 <223> i

<400> 36
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<210> 37
 <211> 26
 <212> DNA
 <213> artificial

<220>
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 <222> (15)..(15)
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<400> 37
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 26

<210> 38
 <211> 20
 <212> DNA
 <213> artificial

<220>

<223> primer

<400> 38

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20

<210> 39

<211> 28

<212> DNA

<213> artificial

<220>

<223> primer

<400> 39

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<210> 40

<211> 27

<212> DNA

<213> artificial

<220>

<223> primer

<400> 40

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27

<210> 41

<211> 27

<212> DNA

<213> artificial

<220>

<223> primer

<400> 41

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27

<210> 42
 <211> 32
 <212> DNA
 <213> artificial

<220>
 <223> primer

<400> 42
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 32

<210> 43
 <211> 24
 <212> DNA
 <213> artificial

<220>
 <223> primer

<400> 43
 aggtccccgc tgttattcct ggac
 24

<210> 44
 <211> 98
 <212> PRT
 <213> bovine

<400> 44

Met Lys Ala Val Gly Ala Trp Leu Leu Cys Leu Leu Leu Leu Gly Leu
 1 5 10 15

Ala Leu Gln Gly Ala Ala Ser Arg Ala His Gln His Ser Met Glu Ile
 20 25 30

Arg Thr Pro Asp Ile Asn Pro Ala Trp Tyr Ala Gly Arg Gly Ile Arg
 35 40 45

Pro Val Gly Arg Phe Gly Arg Arg Arg Ala Ala Leu Gly Asp Gly Pro
 50 55 60

Arg Pro Gly Pro Arg Arg Val Pro Ala Cys Phe Arg Leu Glu Gly Gly

65 70 75 80

Ala Glu Pro Ser Arg Ala Leu Pro Gly Arg Leu Thr Ala Gln Leu Val
 85 90 95

Gln Glu

<210> 45
 <211> 83
 <212> PRT
 <213> rat

<400> 45

Met Ala Leu Lys Thr Trp Leu Leu Cys Leu Leu Leu Leu Ser Leu Val
 1 5 10 15

Leu Pro Gly Ala Ser Ser Arg Ala His Gln His Ser Met Glu Thr Arg
 20 25 30

Thr Pro Asp Ile Asn Pro Ala Trp Tyr Thr Gly Arg Gly Ile Arg Pro
 35 40 45

Val Gly Arg Phe Gly Arg Arg Arg Ala Thr Pro Arg Asp Val Thr Gly
 50 55 60

Leu Gly Gln Leu Ser Cys Leu Pro Leu Asp Gly Arg Thr Lys Phe Ser
 65 70 75 80

Gln Arg Gly

<210> 46
 <211> 249
 <212> DNA
 <213> rat

<400> 46

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 60

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 120

tacacgggcc gcgggatcag gcctgtgggc cgcttcggca ggagaagggc aaccccgagg

180

gatgtcactg gacttggcca actcagctgc ctcccactgg atggacgcac caagttctct
240

cagcgtgga
249

<210> 47
<211> 31
<212> PRT
<213> artificial

<220>
<223> rat fragment (22-52)

<400> 47

Ser Arg Ala His Gln His Ser Met Glu Thr Arg Thr Pro Asp Ile Asn
1 5 10 15

Pro Ala Trp Tyr Thr Gly Arg Gly Ile Arg Pro Val Gly Arg Phe
20 25 30

B1
af
<210> 48
<211> 32
<212> PRT
<213> artificial

<220>
<223> rat fragment (22-53)

<400> 48

Ser Arg Ala His Gln His Ser Met Glu Thr Arg Thr Pro Asp Ile Asn
1 5 10 15

Pro Ala Trp Tyr Thr Gly Arg Gly Ile Arg Pro Val Gly Arg Phe Gly
20 25 30

<210> 49
<211> 33
<212> PRT
<213> artificial

<220>

<223> rat fragment (22-54)

<400> 49

Ser	Arg	Ala	His	Gln	His	Ser	Met	Glu	Thr	Arg	Thr	Pro	Asp	Ile	Asn
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Pro	Ala	Trp	Tyr	Thr	Gly	Arg	Gly	Ile	Arg	Pro	Val	Gly	Arg	Phe	Gly
			20					25					30		

Arg

<210> 50

<211> 20

<212> PRT

<213> artificial

<220>

<223> rat fragment (33-53)

<400> 50

Thr	Pro	Asp	Ile	Asn	Pro	Ala	Trp	Tyr	Thr	Gly	Arg	Gly	Ile	Arg	Pro
1				5					10					15	

Val	Gly	Arg	Phe
			20

<210> 51

<211> 21

<212> PRT

<213> artificial

<220>

<223> rat fragment (33-53)

<400> 51

Thr	Pro	Asp	Ile	Asn	Pro	Ala	Trp	Tyr	Thr	Gly	Arg	Gly	Ile	Arg	Pro
1				5					10					15	

Val	Gly	Arg	Phe	Gly
				20

<210> 52
 <211> 22
 <212> PRT
 <213> artificial

<220>
 <223> rat fragment (33-54)

<400> 52

Thr Pro Asp Ile Asn Pro Ala Trp Tyr Thr Gly Arg Gly Ile Arg Pro
 1 5 10 15

Val Gly Arg Phe Gly Arg
 20

<210> 53
 <211> 93
 <212> DNA
 <213> rat

<400> 53
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 60

acggggccgcg ggatcaggcc tgtgggcccgc ttc
 93

<210> 54
 <211> 96
 <212> DNA
 <213> rat

<400> 54
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 60

acggggccgcg ggatcaggcc tgtgggcccgc ttcggc
 96

<210> 55
 <211> 99
 <212> DNA
 <213> rat

<400> 55
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60

acggggccgc ggatcaggcc tgtggggcgc ttcggcagg
99

<210> 56
<211> 60
<212> DNA
<213> rat

<400> 56
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60

<210> 57
<211> 63
<212> DNA
<213> rat

<400> 57
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60

ggc
63

<210> 58
<211> 66
<212> DNA
<213> rat

<400> 58
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60

ggcagg
66

<210> 59

<211> 87
 <212> PRT
 <213> human

<400> 59

Met Lys Val Leu Arg Ala Trp Leu Leu Cys Leu Leu Met Leu Gly Leu
 1 5 10 15

Ala Leu Arg Gly Ala Ala Ser Arg Thr His Arg His Ser Met Glu Ile
 20 25 30

Arg Thr Pro Asp Ile Asn Pro Ala Trp Tyr Ala Ser Arg Gly Ile Arg
 35 40 45

Pro Val Gly Arg Phe Gly Arg Arg Arg Ala Thr Leu Gly Asp Val Pro
 50 55 60

Lys Pro Gly Leu Arg Pro Arg Leu Thr Cys Phe Pro Leu Glu Gly Gly
 65 70 75 80

Ala Met Ser Ser Gln Asp Gly
 85

<210> 60
 <211> 261
 <212> DNA
 <213> human

<400> 60

atgaagggtgc tgagggcctg gctcctgtgc ctgctgatgc tgggcctggc cctgcgggga
 60

gctgcaagtc gtacccatcg gcactccatg gagatccgca cccctgacat caatcctgcc
 120

tggtagcca gtgcgggat caggcctgtg ggccgcttcg gtcggaggag ggcaaccctg
 180

ggggacgtcc ccaagcctgg cctgcgaccc cggctgacct gcttccccct ggaaggcggt
 240

gctatgtcgt cccaggatgg c
 261

<210> 61
 <211> 31
 <212> PRT
 <213> artificial

<220>
 <223> human fragment (23-53)

<400> 61

Ser Arg Thr His Arg His Ser Met Glu Ile Arg Thr Pro Asp Ile Asn
 1 5 10 15
 Pro Ala Trp Tyr Ala Ser Arg Gly Ile Arg Pro Val Gly Arg Phe
 20 25 30

<210> 62
 <211> 32
 <212> PRT
 <213> artificial

<220>
 <223> human fragment (23-54)

<400> 62

BI
cut
 Ser Arg Thr His Arg His Ser Met Glu Ile Arg Thr Pro Asp Ile Asn
 1 5 10 15
 Pro Ala Trp Tyr Ala Ser Arg Gly Ile Arg Pro Val Gly Arg Phe Gly
 20 25 30

<210> 63
 <211> 32
 <212> PRT
 <213> artificial

<220>
 <223> human fragment (23-55)

<400> 63

Ser Arg Thr His Arg His Ser Met Glu Ile Arg Thr Pro Asp Ile Asn
 1 5 10 15
 Pro Ala Trp Tyr Ala Ser Arg Gly Ile Arg Pro Val Gly Arg Phe Gly

20

25

30

<210> 64
 <211> 20
 <212> PRT
 <213> artificial

<220>
 <223> human fragment (34-53)

<400> 64

Thr Pro Asp Ile Asn Pro Ala Trp Tyr Ala Ser Arg Gly Ile Arg Pro
 1 5 10 15

Val Gly Arg Phe
 20

<210> 65
 <211> 21
 <212> PRT
 <213> artificial

<220>
 <223> human fragment (34-54)

<400> 65

Thr Pro Asp Ile Asn Pro Ala Trp Tyr Ala Ser Arg Gly Ile Arg Pro
 1 5 10 15

Val Gly Arg Phe Gly
 20

<210> 66
 <211> 22
 <212> PRT
 <213> artificial

<220>
 <223> human fragment (34-55)

<400> 66

Thr Pro Asp Ile Asn Pro Ala Trp Tyr Ala Ser Arg Gly Ile Arg Pro
 1 5 10 15

Val Gly Arg Phe Gly Arg
20

<210> 67
<211> 93
<212> DNA
<213> human

<400> 67
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60

gccagtcgcg ggatcaggcc tgtgggcccgc ttc
93

<210> 68
<211> 96
<212> DNA
<213> human

<400> 68
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60

B1
cut
gccagtcgcg ggatcaggcc tgtgggcccgc ttcggt
96

<210> 69
<211> 99
<212> DNA
<213> human

<400> 69
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60

gccagtcgcg ggatcaggcc tgtgggcccgc ttcggtcgg
99

<210> 70
<211> 60
<212> DNA

<213> human

<400> 70

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60

<210> 71

<211> 63

<212> DNA

<213> human

<400> 71

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60

ggt

63

<210> 72

<211> 66

<212> DNA

<213> human

<400> 72

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60

ggtcgg

66

<210> 73

<211> 22

<212> PRT

<213> artificial

<220>

<223> artificial ligand polypeptide

<220>

<221> PEPTIDE

<222> (22)..(22)

<223> Absent or Arg when aa21 is Gly

<220>
 <221> PEPTIDE
 <222> (21)..(21)
 <223> Absent or Gly

<220>
 <221> PEPTIDE
 <222> (11)..(11)
 <223> Gly or Ser

<220>
 <221> PEPTIDE
 <222> (10)..(10)
 <223> Ala or Thr

<400> 73

Thr Pro Asp Ile Asn Pro Ala Trp Tyr Xaa Xaa Arg Gly Ile Arg Pro
 1 5 10 15

Val Gly Arg Phe Xaa Xaa
 20

B1
Cut
 <210> 74
 <211> 11
 <212> PRT
 <213> artificial

<220>
 <223> ligand polypeptide

<220>
 <221> PEPTIDE
 <222> (10)..(10)
 <223> Ile or Thr

<220>
 <221> PEPTIDE
 <222> (5)..(5)
 <223> Gln or Arg

<220>
 <221> PEPTIDE
 <222> (3)..(3)
 <223> Ala or Thr

<400> 74

Ser Arg Xaa His Xaa His Ser Met Glu Xaa Arg
 1 5 10

<210> 75
 <211> 26
 <212> DNA
 <213> artificial

<220>
 <223> primer

<400> 75
 carcaytcca tggagacaag aacccc
 26

Bl
 <210> 76
 <211> 24
 <212> DNA
 <213> artificial

<220>
 <223> primer

<400> 76
 taccaggcag gattgataca gggg
 24

<210> 77
 <211> 25
 <212> DNA
 <213> artificial

<220>
 <223> primer

<400> 77
ggcatcatcc aggaagacgg agcat
25


<210> 78
<211> 25
<212> DNA
<213> artificial

<220>
<223> primer

<400> 78
agcagaggag agggagggta gagga
25

<210> 79
<211> 22
<212> DNA
<213> artificial

<220>
<223> primer

 <400> 79
acgtggcttc tgtgcttgct gc
22

<210> 80
<211> 25
<212> DNA
<213> artificial

<220>
<223> primer

<400> 80
gcctgatccc gcggcccgtg tacca
25

<210> 81
<211> 26

<212> DNA
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<220>
<223> primer

<400> 81
ttgcccttct cctgccgaag cggccc
26

<210> 82
<211> 27
<212> DNA
<213> artificial

<220>
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<400> 82
ggcgggggct gcaagtcgta cccatcg
27

B1
cat
<210> 83
<211> 27
<212> DNA
<213> artificial

<220>
<223> primer

<400> 83
cggcactcca tggagatcgg caccct
27

<210> 84
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<212> DNA
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<220>
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<400> 84

caggcaggat tgatgtcagg ggtgcgg
27

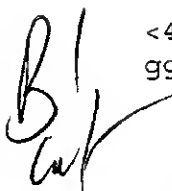
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<220>
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<400> 85
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<210> 86
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<220>
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 <400> 86
ggcctcctcg gaggagccaa gggatga
27

<210> 87
<211> 27
<212> DNA
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<220>
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<400> 87
gggaaaggag cccgaaggag aggagag
27

<210> 88
<211> 25
<212> DNA

<213> artificial

<220>

<223> primer

<400> 88

cctgctggcc attctcctgt cttac
25

<210> 89

<211> 25

<212> DNA


<213> artificial

<220>

<223> primer

<400> 89

gggtccaggt cccgcagaag gttga
25

 <210> 90

<211> 25

<212> DNA

<213> artificial

<220>

<223> primer

<400> 90

gaagacggag catggccctg aagac
25

<210> 91

<211> 25

<212> DNA

<213> artificial

<220>

<223> primer

<400> 91

ggcagctgag ttggccaagt ccagt

25

<210> 92
 <211> 15
 <212> PRT
 <213> artificial

<220>
 <223> N-terminal peptide

<400> 92

Cys Ala Trp Tyr Ala Gly Arg Gly Ile Arg Pro Val Gly Arg Phe
 1 5 10 15

<210> 93
 <211> 15
 <212> PRT
 <213> artificial

<220>
 <223> C-terminal peptide

<400> 93

Cys Ala Trp Tyr Ala Gly Arg Gly Ile Arg Pro Val Gly Arg Phe
 1 5 10 15

<210> 94
 <211> 15
 <212> PRT
 <213> artificial

<220>
 <223> central peptide

<400> 94

Cys Glu Ile Arg Thr Pro Asp Ile Asn Pro Ala Trp Tyr Ala Gly
 1 5 10 15

<210> 95
 <211> 30
 <212> DNA
 <213> artificial

<220>

<223> primer

<400> 95

agattggcat catccaggaa gacggagcat
30

<210> 96

<211> 31

<212> DNA

<213> artificial

<220>

<223> primer

<400> 96

gctgactcga cagcactgtc ttctcgagct g
31

<210> 97

<211> 21

<212> DNA

<213> artificial

<220>

<223> primer

<400> 97

aacccttca tctatgcgtg g
21

<210> 98

<211> 20

<212> DNA

<213> artificial

<220>

<223> primer

<400> 98

atattctggc catgaggcac
20

<210> 99
<211> 28
<212> DNA
<213> artificial

B1
hv
<220>
<223> primer

<400> 99
ttccgagagg agctacgcaa gatgcttc
28
